

Breaking or making chains?

On the future(s) of digital media

It's in the nature of man to think it's his task to redeem the world from its imperfection. For a great deal that means from his own shortcomings. Some think that, with modern technology, we've created the perfect ally in this crusade, whilst others are convinced that we've given birth to a golem of unprecedented proportions. To define what this technology contains is an almost impossible thing to do. Its application is interwoven in, and interweaves a huge variety of fields, making it untenable to think about it as one entity. Thus, talking about modern technology asks for a specific focus that could, in the best case, be metaphoric or serve as a springboard to make an analysis of a larger whole. Digital media is to be considered only a tiny particle in this whole set of gears, but even within this defined field the biggest outlines of a general positivist and negativist vision on technology shimmer through. At the extreme ends of both we find respectively a utopian and a dystopian point of view, propagated by a handful of thinkers whose thoughts are in a constant state of mutual consideration and criticism. They usually don't consider themselves but each other as utopian or dystopian, because these terms imply a certain lack of realism. An accusation you would address to someone else, while regarding your own ideas rather as optimistic or skeptic. Based on past and current developments within media culture (and technology in a broader sense), these ideas are ultimately about envisioning the future. Where are we headed? What are we in for? And what manifestations of this future can we already perceive today? In the constellation of utopia and dystopia, it's all about providing desire and fear with a face.

We've spent the past few months immersing ourselves in literary *user-land*. We've read about imagining, inventing, defining, shaping, analyzing, developing, testing, framing, exploring, criticizing,... the used, the user and the usage, mainly from a digital media perspective. Taking this as a starting point, I'd like to find out what the face of the future (and its harbingers today) looks like according to Nicholas Negroponte and Andrew Keen. The first, founder of the MIT Media Lab and initiator of the OLPC (One Laptop Per Child) project, is seen as a pioneer in the field of computer-aided design. "The epiphany of the digital media utopian thinker" according to Andrew Keen (2006), also a pioneering Internet entrepreneur and former Silicon Valley insider who traded his belief in the Internet dream for skepticism, as he confesses in *The Cult of the Amateur* (Keen, 2007, p12). Both are pulling the opposite end of the rope when it comes to their opinion on the future of digital media.

In Negroponte's *Being Digital* (1995), the future is no longer about atoms, it's about bits (Negroponte, 1995, p4). He calls it a shift in the DNA of information: atoms represent the tactile, slow, 'old' forms of media (newspapers, books, magazines, CD's, DVD's, ...). When constructed of bits on the other hand, media enters a whole new era, in which information moves at the speed of light, is low in production costs, easy to distribute on a large scale and most of all: it's extremely accessible. "The change from atoms to bits is irrevocable and unstoppable" (p4) he goes on, and so far, his predictions are holding up rather well. Different types of old – atomic – media are gradually being replaced by new – digital – forms. They are facing extinction, or at least an endangered existence. It would be naive to deny that this revolution is happening and to this point, this vision (which is a fairly logical one if you look at the history of technological evolution) is perfectly in tune with Keen's. It's in the embrace and propagation of opportunities originating from this revolution that their views are perpendicular to each other.

Perhaps the biggest promise of Negroponte's blueprint for digital tomorrow is the supremacy of democratization. A road toward global egalitarianism. A voice for everyone and a channel to broadcast it worldwide, twenty-four-seven. Everyone connected, sowing and reaping the inexhaustible field of information. Keen calls it "The Great Seduction", a Silicon Valley version of communism (<http://andrewkeen.typepad.com>), destined to end up as a cultural, social and economic disaster. He argues that the steady replacement of traditional – consistently labeled as 'mainstream' – media by a democratized version comes at high costs. Due to an increased blurring of lines between audience and author, fact and fiction, invention and reality, it becomes very hard to distinguish readers from writers, art from advertisement, amateur from expert and so on (Keen, 2007, p27). The common state of information is a distorted one. The people and institutions that provide

quality and reliability are put aside by the authority of the crowd, by YOU! (Time Magazine, 2006). Media democratization on the Internet results in a flattening of culture in which talent is deprived of all chances of development and exposure by doing away with the intermediaries, the trained professionals, the 'middlemen' that scout, polish and produce the genius. In a world where the amateur (Keen makes no distinction between amateurs and dilettantes) prevails, where no one is being paid to edit, check or evaluate materials, putting trust in media content becomes a risky business. In Negroponte's scheme however, this increased opportunity for free expression leads to an increased display of talent and richness of content. It's about the possibility of showing and reporting what never would have been found or searched for by 'the industry' or 'mainstream institutions'. Not only is this challenging the artistic and journalistic field, it's also questioning the traditional formats of scholarship and education. It's about media that 'provides for reaching out to find knowledge and meaning' (Negroponte, 1996, p202). Although not directly attacking intellectualism or the 'smart smarts', Negroponte sees great advantages in injecting 'street smarts' into the superhighway of information that is the Internet. This way, it changes into a true web of human knowledge and assistance (Negroponte, 1996, p203). It's a limitless, ever updating preservative of wisdom. An amplification of common sense. Years of experience that would otherwise remain isolated within a certain group of initiates can now be exchanged, thereby filling gaps, building bridges and securing its survival. According to Keen, this vision of augmented public knowledge is a severe overestimation of what the average Internet user has to say. He sees it more as an amplification of common nonsense. Instead of raising the level of knowledge, it's lowering the bar for real thinking. He calls it a narcissistic way of dealing with information: the Internet is telling us what we already know, it's a mirror of ourselves, a mirror of mediocrity. An unprecedented insult of the human intellect.

The crowd is more than ever a group of individuals. This individualized culture preludes a new age of radical inequality, in which a few – perhaps talented – people hold great deals of power, leaving the masses powerless. Individuals become brands. It's a future of digital fascism and feudalism with dramatic inequalities of power (Keen, 2009). To Keen, a service like Twitter is the epitome of this evolution: the loudest and most opinionated can be defined by their amount of followers. It's revealing the real topology of this new world of inequalities we're entering, one of digital Darwinism. That's a lot of digital isms to chew on and they all tarnish the idea of a global community of equally empowered components, defended by Silicon Valley enthusiasts like Negroponte and Jeff Jarvis. Shortly after publishing *Being Digital*, Negroponte started the non-profit association called One-Laptop-Per-Child. Its Mission Statement: *To create educational opportunities for the world's poorest children by providing each child with a rugged, low-cost, low-power, connected laptop with content and software designed for collaborative, joyful, self-empowered learning* (laptop.org, 2010). Kids in Peruvian, Rwandan and other underdeveloped villages around the globe have been supplied with these \$100 laptops without having any former education or instructions how to use this technology, let alone any real notion of what the Internet is. The majority of these children are illiterate, their parents likewise. The villages they live in are lacking the resources and infrastructure to provide for quality education. Somehow, these children as Internet users would make an awkward illustration for Keen's monkeys. Can you just throw in a bunch of laptops in this environment and expect something good to happen from it? Yes, you can, if we are to believe Negroponte. It sounds like the sequel script for *The Gods Must Be Crazy*, but it's not. How could this possibly work? His answer is playfulness. It's in the same philosophy of MIT's Lego-Logo project (1989), a computer-based robotics environment for kids, that playing is learning. If introduced early enough in a child's life, learning technology can be as natural as learning a language. Do away with the manual, exploration is the key to understanding! One thing worth mentioning here is that Negroponte himself is dyslexic. He starts *Being Digital's* first sentence by writing that he doesn't like to read. Probably, his aversion to traditional education and the urge to develop an alternative that involves less read and more play partially originated from his personal learning experience. Education and the importance of an alternative approach to it are also the core credos of the OLPC association:

- *Children are our most precious natural resource*
- *The solution to poverty, peace and environment is education*
- *Teaching is one but not the only way to achieve learning*

(Negroponte, TED 2006)

The project's results, as presented on TEDxBrussels in November 2009, are remarkable: children are teaching each other, their parents and their teachers how to write, read, send e-mail, surf the Internet and play games on these laptops. It's reversed order. These children are the true agents of change. Somehow, this sweet story of honey and pie craves for a grain of salt. Mark Halpern, a Californian software designer, programmer and editor who's regularly published in *The New Atlantis*, problematizes *the \$100 laptop* in an interview with Andrew Keen (AfterTV, 2006). He describes different stages of deficiency in the scheme, making it invaluable to accomplish its preconceived goals. The first one concerns comprehensibility: by planting computers in a techno-unfamiliar environment, you ignore the fact that using this technology assumes a great deal of sophistication of its users. A mental sophistication in terms of reading and understanding a language, both alphabetic and visual. It takes a long period of cultururation to develop this understanding of symbols, icons or idioms. Proper education is crucial, but there's also the need for an environmental setup that radiates visual elements of a language, so children can learn to understand it without having any technological background. This environment (filled with books, television,...) is lacking in most of the OLPC areas, creating an atmosphere of overwhelming incomprehensibility when suddenly a shiny green device is confronting these children with a visual language that is alien to them. Even if this problem of understanding would be overcome, media literacy would be the next major obstacle. How could these kids distinguish 'the good from the bad', the marketing scams from the truthful messages? *Congratulations, you are the 100th visitor! Click here to claim your \$1.000.000 prize!* Ofcourse they'd click it, give them one reason not to. This example may be innocent, but complete media illiteracy can be a dangerous thing. People start to rely on the information they receive, putting trust in a misapprehension of it could be disastrous. If, miraculously, all these children are media literate enough to indemnify themselves from the biggest threats, there would still be a major issue: what would all this Western-oriented content bring them? What useful skills would they get from it? A specific culture asks for specific software. Children in development areas would find little use in the software toolbox of a highly developed society. It's simply skipping crucial steps for creating sustainable change.

Despite the noble goals that 'non-profit' associations like OLPC publicly premise, there's always the sense of paradox between their do-gooders' status and their strong ties with a capitalist regime. The boundaries between charity and profit are thin, and in most cases, not very transparent. Today's biggest philanthropists are millionaires, celebrities of different kinds who are glad to spend a part of their fortune on welfare. Warren Buffet, Bill Gates, Bono, all topping the list when it comes to financial generosity for worthy causes like world hunger, AIDS and human rights. The ambiguity is imminent. Bono's child of benefaction for instance, *(product)^{RED}*, is licensed to partner companies like *Nike* and *Starbucks*, all joining the force to raise the awareness and funds to fight AIDS in Africa. Slavoj Žižek, Slovenian philosopher and psychoanalyst, makes a sharp formulation of this discrepancy in an article for *In These Times*:

Charity today is the humanitarian mask that hides the underlying economic exploitation. In a blackmail of gigantic proportions, the developed countries are constantly "helping" the undeveloped (with aid, credits, etc.), thereby avoiding the key issue, namely, their complicity in and co-responsibility for the miserable situation of the undeveloped.

(Žižek, 2006)

Žižek is referring to Silicon Valley as the paradigm of 'liberal communism'. An oxymoron in its purest form. People like Negroponte and projects like OLPC claim that their main goal is not to earn money, but to make the world a better place. Making more profit, of course, is one of the pleasant 'side-effects' of this strive. Not only is the taste of this duality sour, the benefits or permanent changes caused by these 'gifts' are usually very vague and again, not very transparent.

Technology could have a great deal of importance in ways to 'solve' certain humanitarian issues, but it shouldn't be conceptualized as the solution itself. It doesn't work that way, certainly not when the leading figures and institutions in pushing technology forward are also the representatives of the empowerment of a successful capitalist approach that creates many of the problems they're tackling. It's a two-faced model. In the case of Negroponte, not only would he and the corporate partners involved in the creation of the XO lap-

tops benefit financially from the project, they would also enhance the amount of power they hold over the users of their technology. If we even ignore the control exerted by the hard- and software developers, there's also another terrain in which power relations can be influenced dramatically by this technology: politics. There's a close correlation between poverty and corrupt governments or power structures. These regimes enslave people in many ways, both physically and mentally. A widespread distribution of cheap laptops would make it possible for the corrupt force to use them as a leverage to increase their power. The intention to break people's chains would only result in making them stronger.

Perhaps the ultimate desire and fear of technophiles and technoskeptics is one and the same: creating technology that acquires humanness. Briefly put: Artificial Intelligence. When Alan Turing wrote his paper *Computing Machinery and Intelligence* in 1950, he was the first to introduce the idea of a 'thinking machine'. The famous Turing Test was his proposal to test if it can actually be done. It calls for a person to engage in a conversation with a hidden entity, being either a computer or a human being. Afterwards, the interrogator has to determine, based on the answers of this entity, whether he's been communicating with a man or a machine. If this person is unable to distinguish the machine from a human being, then there's sufficient reasons to accept that machines can think. Ever since it's introduction, the test has been widely criticized and elaborated on in the philosophy of artificial intelligence. The computer program *ELIZA* from MIT's professor Joseph Weizenbaum is a direct reference to this test, Hubert Dreyfus' *What computers (still) can't do* is largely a critique on this concept of 'thinking', John Searle's *Chinese Room Experiment* is directly tackling Turing's ideas, and there's many more theories and projects reflecting on this landmark in the history of AI. So far, the creation of a machine that thinks like a human being hasn't been achieved yet. But the attempts to come closer to it are plenty, and the will has never been bigger. So has the fear. Maybe not the fear for technology itself, but rather what impact it will have on our own, human behavior. Nicholas Carr's conclusion in *The Atlantic's* piece '*Is google making us stupid?*' is in this respect a very interesting view on Kubrick's apocalyptic '*2001. A Space Odyssey*':

HAL's outpouring of feeling contrasts with the emotionlessness that characterizes the human figures in the film, who go about their business with an almost robotic efficiency. Their thoughts and actions feel scripted, as if they're following the steps of an algorithm. In the world of 2001, people have become so machinelike that the most human character turns out to be a machine. That's the essence of Kubrick's dark prophecy: as we come to rely on computers to mediate our understanding of the world, it is our own intelligence that flattens into artificial intelligence.

Whatever fears or desires we express, optimism and skepticism need each other to maintain balance, to keep the necessary discussion going and force us to keep thinking about technology in a useful, constructive way. Certainly, we (could) benefit a lot from our technology, as long as there's space for honest debate and public criticism, through whatever means of communication. Black and white ultimately result in gray, sometimes darker, sometimes paler. Compromise is generally considered as a weakening of ideas, and there's no such thing as the happy medium in complex matters such as technological development, but perhaps it's the only sustainable way of going forward in a sensible human manner. When Keen twitters that '*one thing science can't help us with is how to be human*' (Keen, november 2010), I can't help but to think that maybe there's nothing more human than science.

(correct referencing will be added later ofcourse...)